

DIG ALERT 1-800-242-1776

Know what's below.

Call before you dig.

48 HOURS BEFORE YOU DIG

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

SITE INFORMATION

APPLICANT: AT

APPLICANT ADDRESS: 200 N. WARNER RD

KING OF PRUSSIA, PA 19406

AT&T PROJECT MANAGER DONNA KIMZEY-STRIKE

SITE ADDRESS: 139 W. 3RD AVENUE

CONSHOHOCKEN, PA 19428

PROPERTY OWNER: PECO

PROPERTY OWNER ADDRESS: PECO ENER

2301 MARKET STREET PHILADELPHIA, PA 19163

75° 18' 24.10" W (-75.306695)

STRUCTURE TYPE: WOODEN UTILITY POLE

JURISDICTION: CONSHOHOCKEN BOROUGH

LATITUDE: 40° 4′ 35.81″ N (40.076614)

LAT/LONG DATUM: NAD 83

GROUND ELEVATION: 143'±

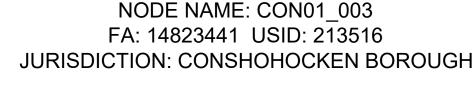
LONGITUDE:

POWER PECO ENERGY

TELCO ZAYO

IMPORTANT NOTICE

THE EXISTING CONDITIONS REPRESENTED HEREIN ARE BASED ON VISUAL OBSERVATIONS AND INFORMATION PROVIDED BY OTHERS. CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. REPORT AND CONFLICTS OR DISCREPANCIES PRIOR TO CONSTRUCTION.





DRIVING DIRECTIONS

DIRECTIONS FROM 200 N. WARNER RD, KING OF PRUSSIA, PA 19406.
HEAD NORTH TOWARD N WARNER RD. TURN LEFT TOWARD N WARNER RD. TURN RIGHT ONTO N WARNER RD. TURN RIGHT ONTO N GULPH
RD. TURN RIGHT ONTO US-202 S/W DEKALB PIKE. USE THE RIGHT 2 LANES TO MERGE ONTO I-76 E TOWARD PHILADELPHIA. TAKE EXIT
331B FOR I-476 TOWARD PLYMOUTH MTG/CONSHOHOCKEN. KEEP RIGHT, FOLLOW SIGNS FOR PA-23. TURN RIGHT ONTO MATSONFORD RD
(SIGNS FOR CONSHOHOCKEN/PA-23). CONTINUE ONTO FAYETTE ST/MATSONFORD BRIDGE ST. TURN LEFT ONTO W ELM ST. TURN RIGHT
ONTO MAPLE ST. TURN RIGHT ONTO W. 3RD AVE TO SIGHT.

SCOPE OF WORK

INSTALL WIRELESS COMMUNICATIONS ANTENNA AND ASSOCIATED SUPPORT EQUIPMENT ON THE EXISTING PRIMARY UTILITY POLE.

CODES

2018 INTERNATIONAL BUILDING CODE
2017 NATIONAL ELECTRICAL CODE
STRUCTURAL STANDARD FOR STEEL ANTENNA TOWER AND
ANTENNA SUPPORTING STRUCTURES TO TIA—222—H
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE
NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL
AUTHORITY HAVING JURISDICTION FOR THE LOCATION. THE EDITION OF
THE ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF
CONTRACT AWARD SHALL GOVERN THE DESIGN
AT&T STANDARDS: ATT—TP 76300, ATT—TP 76416 & UPDATES AS

FROUIRED

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND

STANDARDS REGARDING MATERIAL METHODS OF CONSTRUCTION, OR

OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL

GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT

AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL

GOVERN.

	DRAWING INDEX
SHEET NO:	SHEET TITLE
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C-1	SITE PLAN
C-2	POLE ELEVATIONS
C-3	POLE ELEVATIONS
C-4	PLUMBING & ONE-LINE DIAGRAM
C-5	APPURTENANCE DETAILS
C-6	CONNECTION DETAILS
C-7	LABELING DETAILS
C-8	COLOR CODING DETAILS
G-1	GROUNDING DETAILS
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES
GN-3	GENERAL NOTES

ARCHITECT/ENGINEER

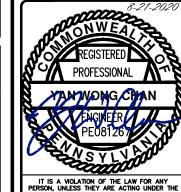
JACOBS ENGINEERING GROUP, INC. 200 NORTH WARNER Rd. KING OF PRUSSIA, PA 19406 CONTACT: PAUL CHAN P.E. PROJECT MANAGER TEL: (484) 322-2069

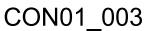




DRAWN BY:	B. POTESTA
CHECKED BY:	P. CHAN
	$\overline{}$

08.21.20	UPDATED
03.04.20	UPDATED
08.21.19	UPDATED - POLE RELOCATION
11.12.18	FINALS





139 W. 3RD AVENUE CONSHOHOCKEN, PA 19428

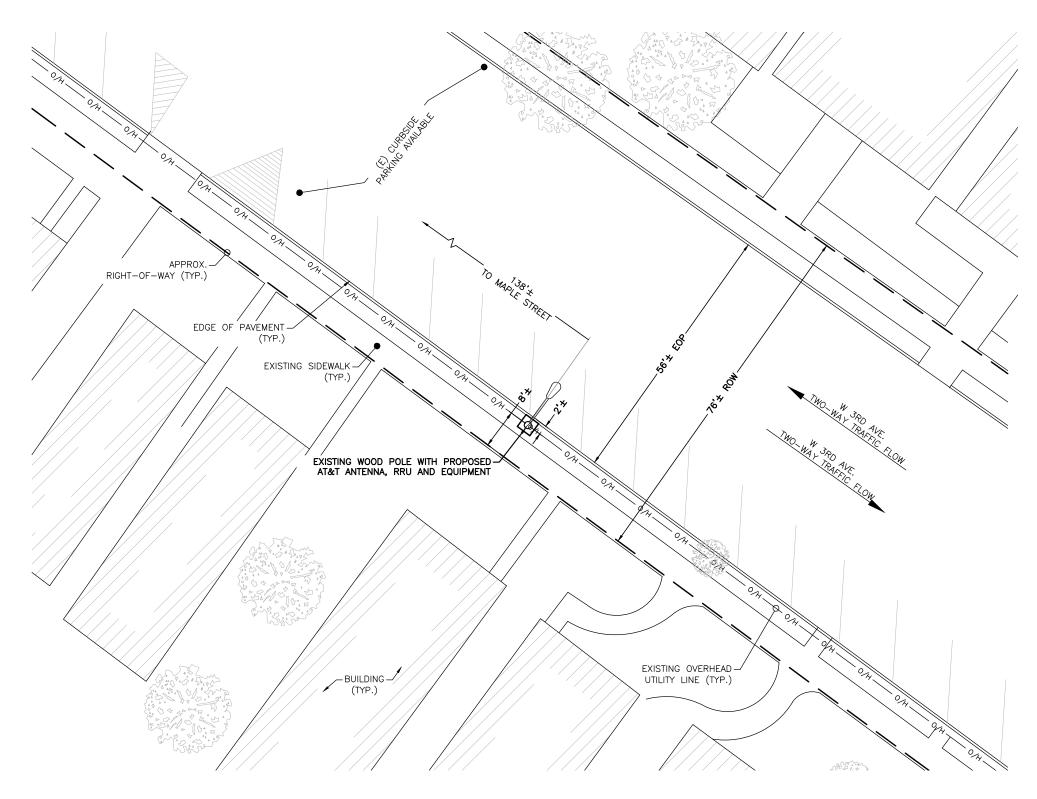
SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1





NOTES:

- 1. SITE AERIAL IMAGE AND NORTH ARROW OBTAINED FROM GOOGLE ON 08/12/19.
- 2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
- 3. ALL POWER SOURCE TO BE PROVIDED BY PECO ENERGY AND FIBER SOURCE TO BE PROVIDED BY ZAYO.
- ALL PROPOSED EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH ATT-TP 76416.

NOTE:
THIS SITE PLAN WAS GENERATED WITHOUT THE USE
OF A SURVEY. PROPERTY LINES, RIGHT-OF-WAYS, POWER AND TELCO UTILITY POINT CONNECTIONS/ROUTES AND EASEMENTS SHOWN ON

THESE PLANS ARE ESTIMATED. ALL ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE FIELD.





200 N. WARNER RD., SUITE 203 KING OF PRUSSIA, PA 19406

	PROJECT NO:	EP4TURES
ı	DRAWN BY:	B. POTESTA
L	CHECKED BY:	P. CHAN

3	08.21.20	UPDATED
2	03.04.20	UPDATED
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CON01 003

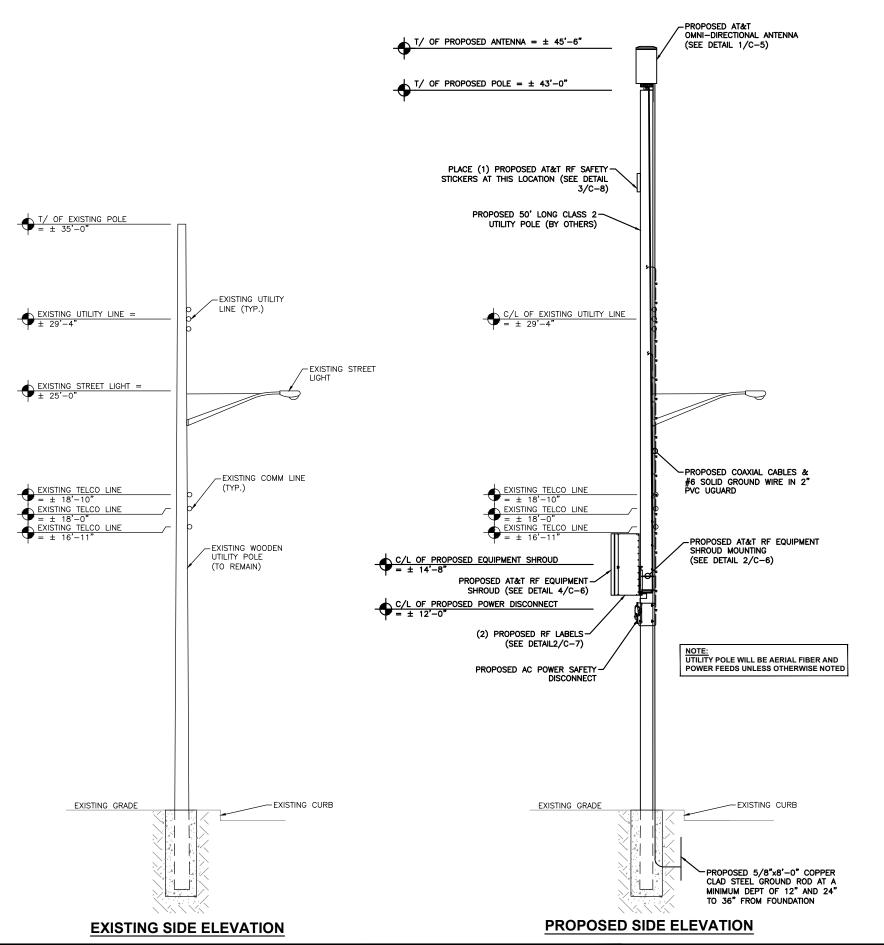
139 W. 3RD AVENUE CONSHOHOCKEN, PA 19428

SHEET TITLE

SITE PLAN

C-1

SITE PLAN



NOTES:

- CONTRACTOR SHALL REFER TO THE STRUCTURAL ANALYSIS REPORT. NO EQUIPMENT SHALL BE INSTALLED UNLESS IN ACCORDANCE WITH THIS REPORT.
- 2. ELEVATION BASED ON IKE GPS SURVEY PERFORMED BY JACOBS ENGINEERING GROUP, INC.
- ALL PROPOSED EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH ATT—TP 76416.
- 4. ALL PROPOSED HARDWARE SHALL BE STAINLESS STEEL.
- 5. ALL CONDUIT SHALL BE SECURED EVERY 18" OR LESS.
- INSTALLERS WORKING IN THE AREA OF THE POLE ABOVE THE NORMAL COMMUNICATION SPACE MUST MEET OSHA 1910.269 REQUIREMENTS.
- 7. THE POLE/POST OWNER SHOULD ADVISE ALL EMPLOYEES THAT AT&T ANTENNAS ARE LOCATED ON SOME POLES/POSTS AND THAT THE GUIDANCE PROVIDED BY THE SIGNS SHOULD BE FOLLOWED.

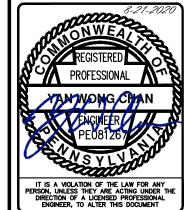


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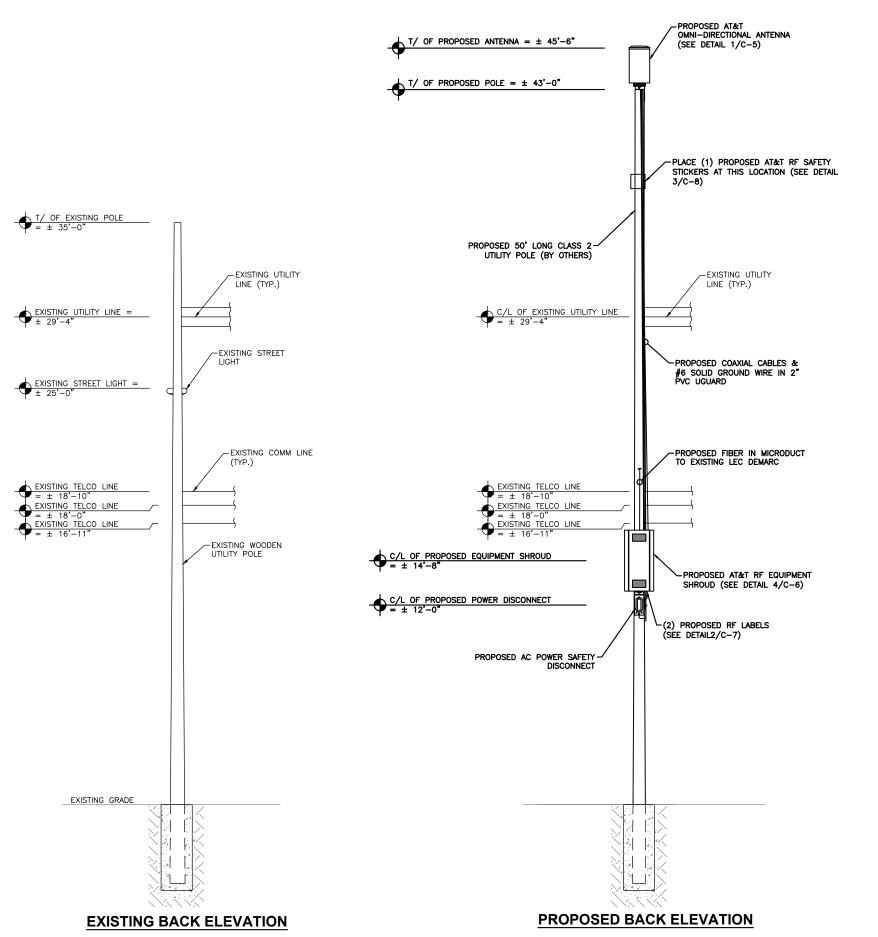
SHEET TITLE

POLE ELEVATIONS

SHEET NUMBE

C-2

1 POLE ELEVATIONS



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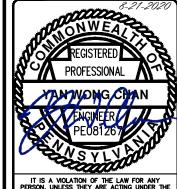


200 N. WARNER RD. KING OF PRUSSIA, PA 19406



DRAWN BY: B. POTESTA CHECKED BY: P. CHAN	PROJECT NO:	EP4TURES
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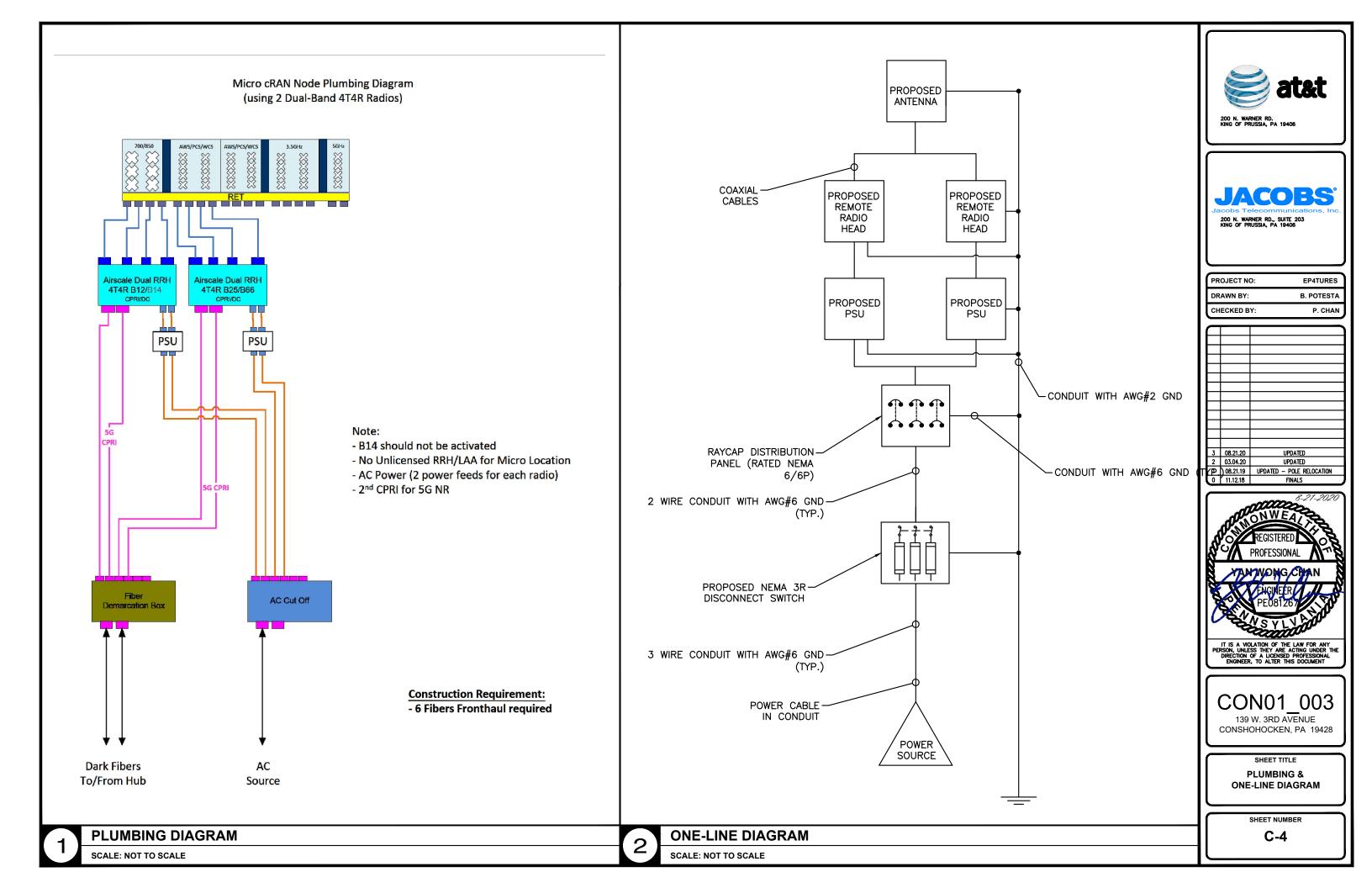
POLE ELEVATIONS

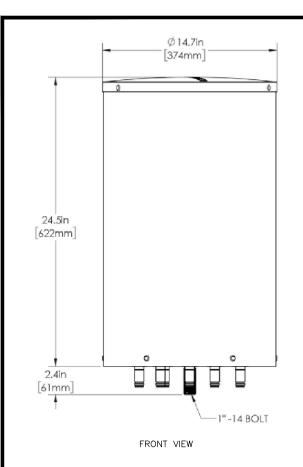
SHEET NUMBER

C-3

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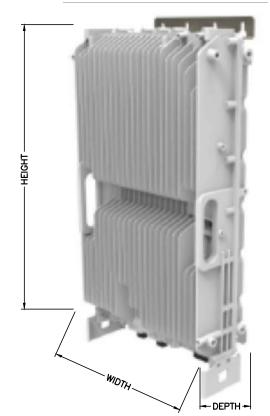
POLE ELEVATIONS





MECHANICAL SPECIFICATIONS

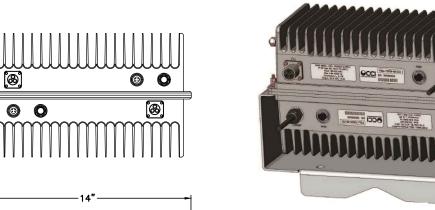
OPERATING TEMPERATURE	-40° TO 158°F
ANTENNA WEIGHT	30.9 LBS (14 KG)
ANTENNA DIAMETER	14.7" (374 MM)
ANTENNA HEIGHT	24.5" (622 MM)
RADOME MATERIAL	ASA
RADOME COLOR	GRAY, BROWN, 3M
WIND SURVIVAL RATING	150mph (241km/h)



NOKIA RRH MODEL	HEIGHT (INCH)	WIDTH (INCH)	DEPTH (INCH)	WEIGHT (LBS)
AIR SCALE DUAL RRH 4T4R B12/14 320W AHLBA	22.05	12.13	6.97	77.16
AIR SCALE DUAL RRH 4T4R B25/66 320W AHFIB	22.05	12.13	5.86	66.14

GALTRONICS GQ2412-06613

SCALE: NOT TO SCALE

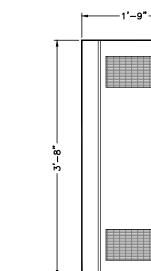


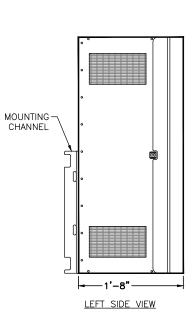
MECHANICAL SPECIFICATIONS

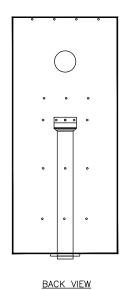
OPERATING TEMPERATURE	-40° TO 272°F
WEIGHT	23.3 LBS (10.60 KG)
HEIGHT	8.4" (213.4 MM)
WIDTH	6" (152.4 MM)
LENGTH	14" (355.6 MM)



SCALE: NOT TO SCALE







NOTE: SHROUD SHOULD BE LABELED AT&T MOBILITY, 24 HOURS CONTACT: 800-638-2822

139 W. 3RD AVENUE CONSHOHOCKEN, PA 19428

SHEET TITLE

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CON01 003

JACOBS°

3 08.21.20 UPDATED
2 03.04.20 UPDATED
1 08.21.19 UPDATED - POLE RELOCATION
0 11.12.18 FINALS

EP4TURES

B. POTESTA P. CHAN

PROJECT NO:

CHECKED BY:

DRAWN BY:

APPURTENANCE DETAILS

SHEET NUMBER

C-5



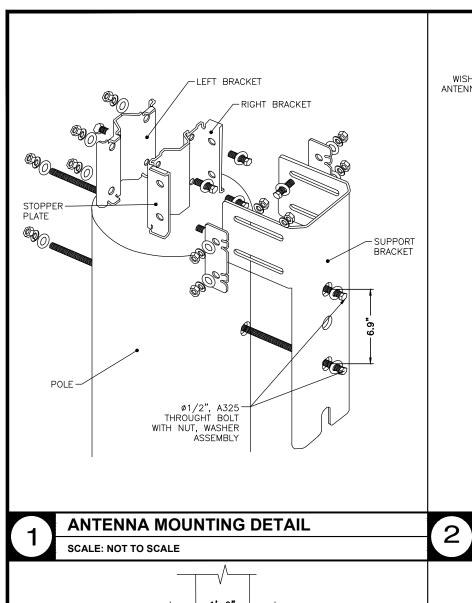
CCI PSU-1200W-48-X DETAIL

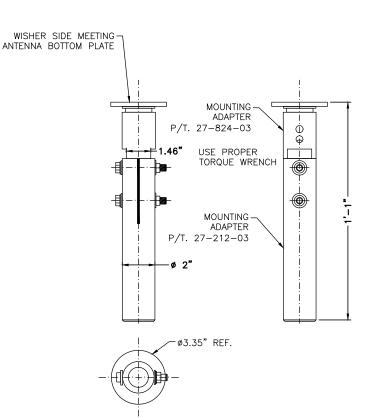
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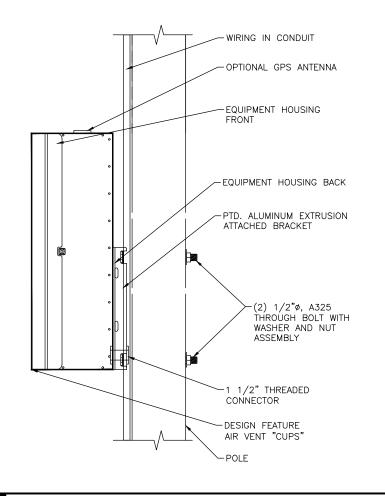
EQUIPMENT SHROUD DETAIL

FRONT VIEW

SCALE: NOT TO SCALE









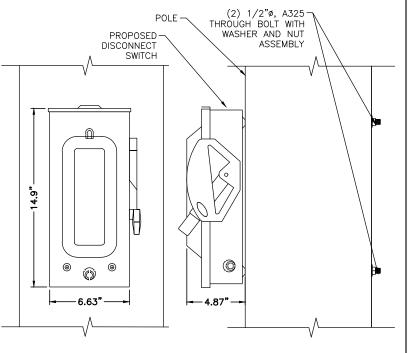


П	PROJECT NO:	EP4TURES
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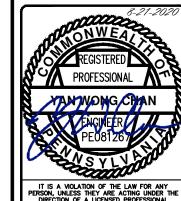
3	08.21.20	UPDATED	
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ANTENNA MOUNTING BRACKET

SCALE: NOT TO SCALE



SCALE: NOT TO SCALE



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CON01 003

139 W. 3RD AVENUE CONSHOHOCKEN, PA 19428

SHEET TITLE

CONNECTION DETAILS

SHEET NUMBER

RRH SHROUD FRONT VIEW

0

0

SCALE: NOT TO SCALE

POLE —

5

-DESIGN FEATURE AIR VENT "CUPS"

- DESIGN FEATURE

AIR VENT "CUPS"

DISCONNECT SWITCH MOUNTING

SCALE: NOT TO SCALE

6

NOT USED

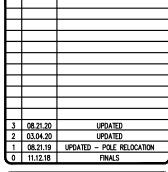
SCALE: NOT TO SCALE

C-6



JACOBS°

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CON01 003

139 W. 3RD AVENUE CONSHOHOCKEN, PA 19428

SHEET TITLE

LABELING DETAILS

SHEET NUMBER

C-7

DMARC LABEL REQUIREMENTS

LINE 1: FIBER CABLE & COUNT LINE 2: JACK #

RADIO LABEL REQUIREMENTS

LINE 1: RADIO COMMON ID

DMARC FIBER LABEL REQUIREMENTS

LINE 1: FIBER CABLE, COUNT AND JACK # LINE 2: RADIO COMMON ID AND CPRI PORT

LINE 1: RADIO COMMON ID AND CPRI PORT

LINE 2: FIBER CABLE, COUNT AND JACK #

RADIO FIBER LABEL REQUIREMENTS

NODE LABELING

SCALE: NOT TO SCALE

SHROUD LABEL

NOTICE

RF ENERGY EMITTED BY THIS DEVICE MAY EXCEED THE FCC'S GENERAL PUBLIC EXPOSURE LIMITS, STAY AT LEAS ONE FOOT (1'), AWAY FROM THE DEVICE. CALL 800-638-282 FOR HELP IF YOU NEED ACCESS WITHIN ONE FOOT (1).

NOTE:

TWO 1"X6" NOTICE DECALS SHALL BE PLACED ON OPPOSITE SIDES OF THE SHROUD.

SCALE: NOT TO SCALE

NOTICE

AT&T operates antennas at this structure.

Above this point you are entering an area where radio frequency (RF) fields may exceed the FCC General Population exposure limits.

Follow satety guidelines for working in an RF environment.

Keep 16 ft. away from the fronts of the

Contact AT&T at 800-638-2822, opt. 9, 3 and follow their instructions prior to performing any maintenance or repairs above this point.

This is AT&T Site USID 213516

NOTE:

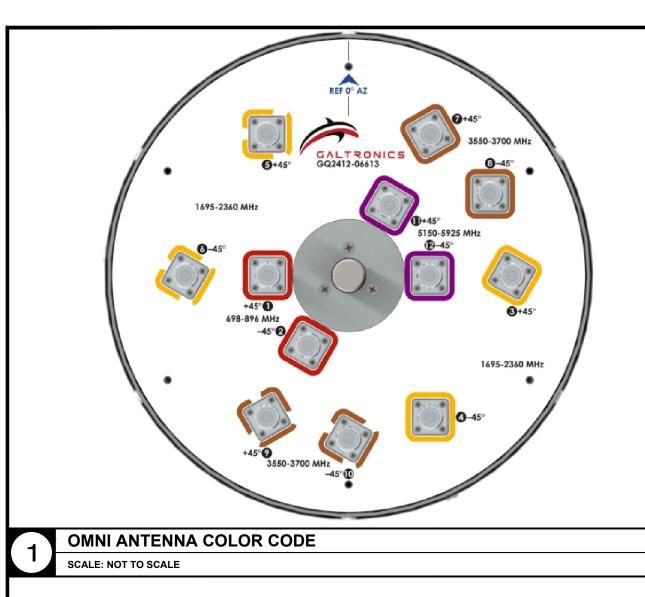
ONE 12.25"X12.25" POLYETHYLENE RF SIGN SHALL BE PLACED ON THE POLE AT 5'-0" BELOW THE BOTTOM OF

RF SAFETY SIGN

SCALE: NOT TO SCALE

NOT USED

SCALE: NOT TO SCALE



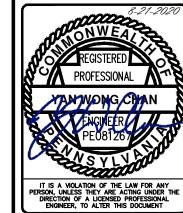


JACOBS° 200 N. WARNER RD., SUITE 203 KING OF PRUSSIA, PA 19406

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NOT USED SCALE: NOT TO SCALE



CON01 003

139 W. 3RD AVENUE CONSHOHOCKEN, PA 19428

SHEET TITLE

COLOR CODING DETAILS

SHEET NUMBER C-8

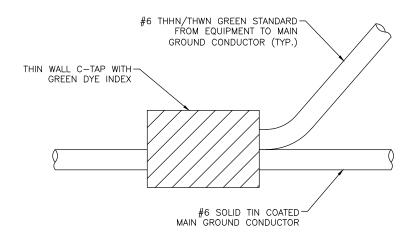
NOT USED

SCALE: NOT TO SCALE

NOT USED

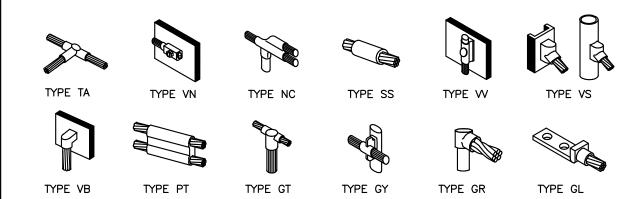
SCALE: NOT TO SCALE

NOTE: CONTRACTOR TO SURROUND COMPLETED CONNECTION WITH HEAT-SHRINK TUBING TO ENSURE WEATHER PROOF CONNECTION.



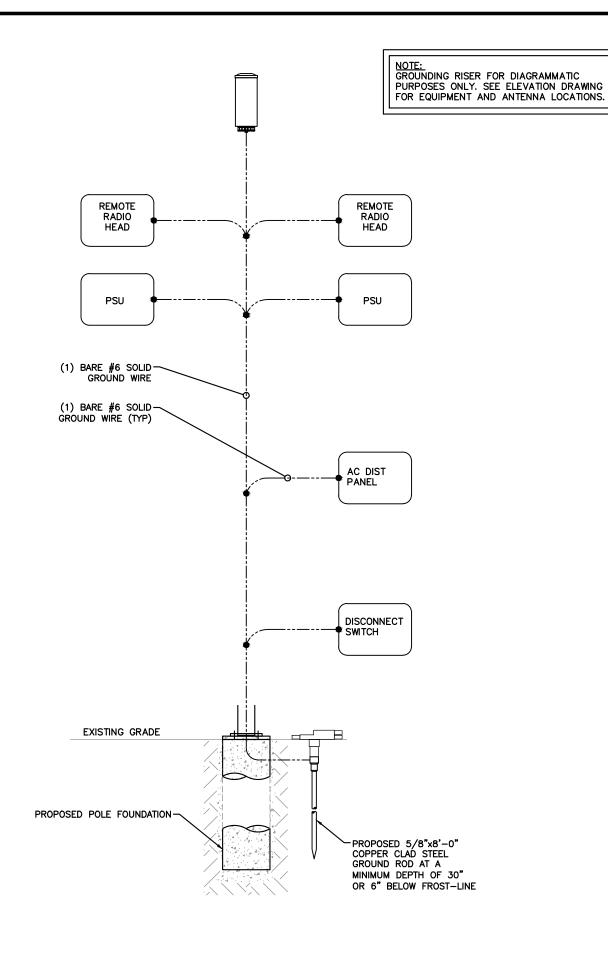
C-TAP DETAIL

SCALE: NOT TO SCALE



ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH PROJECT MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.

WELD CONNECTION DETAILS



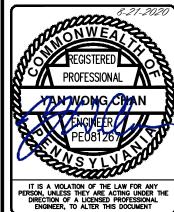


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CON01 003

139 W. 3RD AVENUE CONSHOHOCKEN, PA 19428

SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

G-1

3

GROUNDING RISER DIAGRAM

GENERAL CONSTRUCTION NOTES:

- 1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL BUILDING CODE, THE LATEST ADOPTED EDITION AND ALL OTHER APPLICABLE CODES AND ORDINANCES.
- 2. CONTRACTOR SHALL CONSTRUCT SITE IN ACCORDANCE WITH THESE DRAWINGS AND LATEST JACOBS CONSTRUCTION STANDARDS. THE SPECIFICATION IS THE RULING DOCUMENT AND ANY DISCREPANCIES BETWEEN THE SPECIFICATION AND THE CONSTRUCTION DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OR JACOBS CM PRIOR TO THE COMMENCEMENT OF WORK.
- 3. CONTRACTOR SHALL VISIT THE JOB SITE AND SHALL FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED, AS SHOWN, PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OR JACOBS CM PRIOR TO THE COMMENCEMENT OF WORK, NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OF FIELD CONDITIONS.
- 4. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. CONTRACTOR IS REQUIRED TO FURNISH AND INSTALL ANY/ALL ITEMS FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM SUBJECT ONLY TO OWNER-SUPPLIED ITEMS. CONTRACTOR SHALL PROVIDE ANY/ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- 5. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. THE WORK SHALL INCLUDE FURNISHING MATERIALS. EQUIPMENT AND APPURTENANCES. AND LABOR NECESSARY TO EFFECT ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS. OWNER PROVIDED AND CONTRACTOR INSTALLED MATERIALS WILL INCLUDE THE FOLLOWING. UNLESS NOTED OTHERWISE:
 - A) TRANSMITTER
 - B) UHF ANTENNA AND MOUNTING BRACKETS, GPS ANTENNAS AND KU ANTENNAS
 - C) UHF COAX AND HANGERS
 - D) INTEGRATED LOAD CENTER
- 6. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING ANY DISCREPANCIES TO THE ATTENTION OF THE JACOBS CM, IN WRITING, PRIOR TO THE COMMENCEMENT OF WORK.
- 7. DETAILS PROVIDED ARE FOR THE PURPOSE OF SHOWING DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR SITE CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- 8. CONTRACTOR SHALL PAY FOR APPLICABLE PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO ORDERING MATERIALS AND THE COMMENCEMENT OF WORK.
- 9. THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS. INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.
- 10. CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING, AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- 11. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING ACCEPTED INDUSTRY-STANDARD SKILLS AND ATTENTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT, UNLESS OTHERWISE NOTED.
- 12. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT, WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS.
- 13. CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE JACOBS CM AND SCHEDULE THEIR ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE
- 14. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THEIR WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.
- 15. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- 16. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING ETC. AND IMMEDIATE REPAIR, TO NEW CONDITION, ANY DAMAGE THAT OCCURS DURING CONSTRUCTION AT THE SOLE COST OF THE CONTRACTOR.

- 17. IN DRILLING HOLES, OR CORING, INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS. PIPE RUNS ETC. MUST BE CLEARLY UNDERSTOOD THAT REINFORCING STEEL SHALL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES (UNLESS NOTED OTHERWISE). LOCATIONS OF REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND THERÉFORE MUST BE LOCATED BY THE CONTRACTOR USING APPROPRIATE METHODS AND EQUIPMENT PRIOR TO ANY DRILLING OR CORING OPERATIONS IN EXITING CONCRETE
- 18. CONTRACTOR SHALL REPAIR, TO NEW CONDITION, ALL EXISTING WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND IN WITH
- 19. CONTRACTOR SHALL SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES OR MATERIALS WITH U.L. LISTED AND FIRE CODE APPROVED MATERIALS AND SYSTEMS THAT MEET OR EXCEED THE RATING OF THE ASSEMBLY IN WHICH THE NEW PENETRATION IS PLACED.
- 20. CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST OR SMUDGES OF ANY NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.
- 21. MINIMUM BEND RADIUS OF ANTENNA CABLES SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURERS RECOMMENDATIONS.
- 22. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION SHALL BE IN CONFORMANCE WITH JURISDICTIONAL OR STATE AND LOCAL GUIDELINES FOR FROSION AND SEDIMENT CONTROL AND COORDINATED WITH LOCAL REGULATORY AUTHORITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ANY EROSION CONTROL MEASURES, RECORD-KEEPING, MONITORING, AND REPORTING TO THE OWNER AND REGULATORY AUTHORITIES.
- 23. ALL CONSTRUCTION WORK IS TO ADHERE TO APPLICANT'S INTEGRATED CONSTRUCTION STANDARDS UNLESS STATE OR LOCAL CODE IS MORE STRINGENT.
- 24. THE INTENT OF THE PLANS AND SPECIFICATIONS IS TO PERFORM THE CONSTRUCTION IN ACCORDANCE PER STATE BUILDING STANDARDS CODE AND STATE CODE OF REGULATIONS, SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE APPROVED PLANS AND SPECIFICATIONS WHEREIN THE FINISHED WORK WILL NOT COMPLY PER STATE CODE OF REGULATIONS, A SCOPE OF WORK DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE JURISDICTION BEFORE PROCEEDING WITH THE WORK. A CHANGE ORDER FOR THAT SCOPE SHALL BE SUBMITTED TO THE JACOBS CM PRIOR TO PROCEEDING WITH THE
- 25. ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED BY THE CONTRACTOR FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY 12. ALL WORK SHALL BE COORDINATED WITH OWNER TRADES TO AVOID INTERFERENCE DAMAGE FOR THE DURATION OF WORK.
- CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE, ANY CORRECTIVE WORK SHALL BE COMPLETED AT THE SOLE COST OF THE CONTRACTOR.

ELECTRICAL NOTES:

- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY JACOBS CM AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE JACOBS CM HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
- 2. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATIÓN AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, ETC. THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF THEIR BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC. ALL CODES AND ORDINANCES OF THE LOCAL JURISDICTION. AND POWER AND TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT ARE
 - A) UL UNDERWRITERS LABORATORIES
- B) NEC NATIONAL ELECTRICAL CODE
- C) NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
- D) OSHA OCCUPATIONAL SAFETY AND HEALTH ACT
- E) SBC STANDARD BUILDING CODE
- F) NFPA NATIONAL FIRE PROTECTION AGENCY
- G) ANSI AMERICAN NATIONAL STANDARDS INSTITUTE
- H) IEEE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
- I) ASTM AMERICAN SOCIETY FOR TESTING MATERIALS
- REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH JACOBS CM ANY SIZES AND LOCATIONS WHEN NEEDED.
- EXISTING SERVICES: CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
- CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC ... ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE JACOBS CM, PRIOR TO BEGINNING ANY WORK.
- MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE, ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION. UNLESS OTHERWISE NOTED
- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- 9. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- 10. ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY APPLICANT.
- 11. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY FUNCTIONAL AND SHALL BE APPROVED BY THE JACOBS CM AND LOCAL JURISDICTION. ANY DEFICIENCIES SHALL BE CORRECTED BY AN ELECTRICAL CONTRACTOR AT THE SOLE COST OF THE CONTRACTOR.
- WITH THE PROGRESS OF CONSTRUCTION.
- 13. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED BY THE CONTRACTOR WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
- 14. CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
- 15. DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION AND BACKFILLING AND COMPACTION. REFER TO NOTES AND REQUIREMENTS "EXCAVATION, AND BACKFILLING"
- 16. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA AND IECE.
- 17. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURER'S CATALOG INFORMATION OF ANY/ALL EQUIPMENT AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE JACOBS CM PRIOR TO INSTALLATION.
- 18. ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE JACOBS CM UPON
- 19. THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- 20. DISCONNECT SWITCHES SHALL BE UL-RATED, H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
- 21. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND KNOWN AS "NO-OXIDE A" BY DEARBORNE CHEMICAL COMPANY. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.

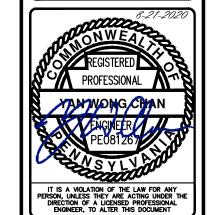




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2	03.04.20	UPDATED
1	08.21.19	UPDATED — POLE RELOCATION
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CON01 003

139 W. 3RD AVENUE CONSHOHOCKEN, PA 19428

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1

ELECTRICAL NOTES CONT'D:

- 22. RACEWAYS: CONDUIT SHALL BE SCHEDULE 80 PVC MEETING OR EXCEEDING NEMA TC2 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL—6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIDGED CONDUIT. COAT ALL THREADS WITH "BRITE ZINC" OR "COLD GALV.".
- 23. SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
- 24. CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, UNLESS OTHERWISE NOTED, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.
- 25. CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
- 26. SERVICE: AS SPECIFIED ON THE DRAWINGS, OWNER OR OWNER'S AGENT WILL 3. APPLY FOR POWER. ALL PROVISIONS FOR TEMPORARY POWER WILL BE OBTAINED BY THE CONTRACTOR.
- 27. TELEPHONE OR FIBER SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.
- 28. ELECTRICAL AND TELCO/FIBER RACEWAYS TO BE BURIED A MINIMUM DEPTH OF 30", UNLESS OTHERWISE NOTED.
- 29. CONTRACTOR SHALL PLACE 6" WIDE DETECTABLE WARNING TAPE AT A DEPTH OF 6" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTIONS TAPE TO READ "CAUTION BURIED ELECTRIC" OR BURIED TELECOMM".
- 30. ALL BOLTS SHALL BE 3-16 STAINLESS STEEL.

GROUNDING NOTES:

- ALL HARDWARE SHALL BE 3-16 STAINLESS STEEL, INCLUDING LOCK WASHERS. COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND, AS SPECIFIED, BEFORE MATING. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR LARGER.
- FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
- 3. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING
- 4. ALL ELECTRICAL AND GROUNDING AT THE POLE SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.
- 5. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
- 6. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #6 GROUND WIRES. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS.
- 7. ALL GROUND CONNECTIONS SHALL BE #6 AWG, UNLESS OTHERWISE NOTED. ALL WIRES SHALL BE COPPER WITH THHN, UNLESS OTHERWISE NOTED. ALL GROUND WIRE SHALL BE SOLID TIM COATED OR STRANDED GREEN INSULATED WIRE.
- 8. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE, 10 OHMS MAXIMUM. PROVIDE SUPPLEMENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED OHMS READING. GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITNESSED BY THE JACOBS CM.
- 9. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING 5. GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
- 10. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED A MINIMUM OF 30" BELOW GRADE/ 6" BELOW FROST-LINE IN TRENCH, UNLESS OTHERWISE NOTED. BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT/ENGINEER.
- 11. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM OF 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.
- 12. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
 - A) BURNDY, HY-GRADE U.L. LISTED CONNECTORS FOR OUTDOOR USE OR AS APPROVED BY APPLICANT PROJECT MANAGER.
 - B) CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
 - C) ONE (1) HOLE TINNED COPPER COMPRESSION (LONG BARREL) FITTINGS.
- 13. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP (RESULTING FROM USE OF PROPER CRIMPING DEVICES) AND WEATHER—PROOFED WITH HEAT SHRINK.

- 14. ALL CONNECTION HARDWARE SHALL BE TYPE 3-16 STAINLESS STEEL (NOT ATTRACTED TO MAGNETS).
- 15. 15. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250—82 AND SHALL BOND ALL EXISTING AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS.

TESTING AND EQUIPMENT TURN UP REQUIREMENTS:

- RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT TESTING WILL COMPLY WITH CURRENT INDUSTRY STANDARDS AND/OR THOSE STANDARDS OF THE EQUIPMENT MANUFACTURER OR PROVIDED TO THE CONTRACTOR PRIOR TO TESTING
- 2. CONTRACTOR WILL USE THE APPROPRIATE CALIBRATED TESTING EQUIPMENT IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT THAT MEET INDUSTRY STANDARDS OF THE MANUFACTURER OR THOSE STANDARDS PROVIDED TO THE CONTRACTOR PRIOR TO TESTING.
- 3. CONTRACTOR TO VERIFY AND RECORD ALL TEST RESULTS AND PROVIDE THESE RESULTS WITHIN THE FINAL CLOSE OUT PACKAGE.
- 4. ALL PERSONNEL INVOLVED IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT WILL BE REQUIRED TO HAVE BEEN TRAINED AND/OR CERTIFIED IN THE PROPER TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT.
- 5. ALL TEST RESULTS SHALL BE TIME STAMPED, RECORDED AND PRESENTED PRIOR TO ENERGIZING AND TURN UP OF ANY EQUIPMENT.
- 6. GPS EQUIPMENT IS NOT TO BE TESTED OR ATTACHED TO ANY CABLING DURING TESTING, DOING SO WILL DAMAGE THE GPS UNIT.
- PRIOR TO TESTING IF THE CONTRACTOR HAS ANY QUESTIONS ABOUT THE TESTING PROCEDURES THEY ARE TO CALL AND OBTAIN ASSISTANCE FROM A QUALIFIED DESIGNATED TESTING REPRESENTATIVE.
- 8. EQUIPMENT IS NOT TO BE ENERGIZED UNTIL ALL TESTING HAS BEEN COMPLETED, APPROVED AND THE APPROPRIATE AUTHORITY HAS BEEN NOTIFIED AND GIVES APPROVAL TO ENERGIZE THE EQUIPMENT.

SITE WORK NOTES:

- DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
- 2. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON AS-BUILD DRAWINGS BY GENERAL CONTRACTOR AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.
- 3. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
- 4. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER OR JACOBS CM FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT THEIR OWN RISK AND EXPENSE. CONTRACTOR SHALL CALL LOCAL UTILITY LOCATE HOT LINE, SUCH AS 811, FOR UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION.
- 5. ALL NEW AND EXISTING STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK. ANY COST RELATED TO ADJUSTING EXISTING STRUCTURES SHALL BE BORNE SOLELY BY THE CONTRACTOR.
- 6. GRADING OF THE SITE WORK AREA IS TO BE SMOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO EXISTING GRADES AT THE GRADING LIMITS.
- ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
- 8. STRUCTURAL FILLS SUPPORTING PAVEMENTS SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DRY DENSITY, UNLESS OTHERWISE NOTED.
- NEW GRADES NOT IN BUILDING AND DRIVEWAY IMPROVEMENT AREA TO BE ACHIEVED BY FILLING WITH APPROVED CLEAN FILL AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY.

- 10. ALL FILL SHALL BE PLACED IN UNIFORM LIFTS. THE LIFTS THICKNESS SHOULD NOT EXCEED THAT WHICH CAN BE PROPERLY COMPACTED THROUGHOUT ITS ENTIRE DEPTH WITH THE EQUIPMENT AVAILABLE.
- 11. ANY FILLS PLACED ON EXISTING SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL TO 1 VERTICAL SHALL BE PROPERLY BENCHED INTO THE EXISTING SLOPE AS DIRECTED BY GEOTECHNICAL ENGINEER.
- 12. CONTRACTOR SHALL CLEAN ENTIRE SITE AFTER CONSTRUCTION SUCH THAT NO DEBRIS, PAPER, TRASH, WEEDS, BRUSH, EXCESS FILL, OR ANY OTHER DEPOSITS WILL REMAIN. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF—SITE BY THE GENERAL CONTRACTOR.
- 13. ALL TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS SHALL BE PROTECTED BY THE GENERAL CONTRACTOR.
- 14. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION.

ENVIRONMENTAL NOTES:

- ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS.
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER
 CLEAN UP FOR AREAS IN VIOLATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS. ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION AND RELEASE OF SITE.
- 3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES AS REQUIRED BY THE LOCAL JURISDICTION WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.
- 4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT TO EROSION.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES WITH SILT AND EROSION CONTROL MEASURES MAINTAINED ON THE DOWNSTREAM SIDE OF SITE DRAINAGE. ANY DAMAGE TO ADJACENT PROPERTY AS A RESULT OF EROSION WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.
- CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
- 3. SEEDING AND MULCHING AND/OR SODDING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.
- 9. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE, BUT IS NOT LIMITED TO SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.
- 10. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES.
- 11. GENERAL CONTRACTOR TO PLACE MATERIAL AT ALL CATCH BASINS ADJACENT TO CONSTRUCTION SITE TO PREVENT SOLID WASTE CONTAMINATION FROM ENTERING SEWER SYSTEM.

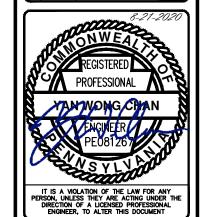




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	2	03.04.20	UPDATED
	1	08.21.19	UPDATED - POLE RELOCATION
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CON01 003

139 W. 3RD AVENUE CONSHOHOCKEN, PA 19428

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-2

FOUNDATION, EXCAVATION AND BACKFILL NOTES:

- ALL FINAL GRADED SLOPES SHALL BE A MAXIMUM OF 3 HORIZONTAL TO 1 VERTICAL, UNITESS OTHERWISE NOTED.
- 2. BACKFILL OF POLE SHALL BE PERFORMED IN ONE (1) OF THREE (3) OPTIONS:
 - A) PREFERRED: RAINBOW INDUSTRIES POLE SETTING FOAM SHALL BE INSTALLED PER MANUFACTURER SPECS. FOAM SHALL ALWAYS BE USED FRO POOR SOILS. B) SECONDARY: CONCRETE (REQUIRES JACOBS CM WRITTEN APPROVAL) ALLOWABLE SOIL PRESSURE = 2000 PSF (ASSUMED). NON-NATIVE SOILS SHALL BE REMOVED FROM BORE AREA AND SHALL NOT BE REUSED FOR BACKFILL.
- 3. ALL EXCAVATIONS PREPARED FOR PLACEMENT OF CONCRETE SHALL BE OF UNDISTURBED SOILS, SUBSTANTIALLY HORIZONTAL AND FREE FROM ANY LOOSE, UNSUITABLE MATERIAL OR FROZEN SOILS, AND WITHOUT THE PRESENCE OF POUNDING WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED WHEN REQUIRED. COMPACTION OF SOILS UNDER CONCRETE PAD FOUNDATIONS SHALL NOT BE LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR THE SOIL IN ACCORDANCE WITH ASTM D1557.
- 4. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC OR UNSUITABLE MATERIAL. IF ADEQUATE BEARING CAPACITY IS NOT ACHIEVED AT THE DESIGNED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME TYPE SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. ANY STONE SUB BASE MATERIAL, IF USED, SHALL NOT SUBSTITUTE FOR REQUIRED THICKNESS OF CONCRETE.
- 5. ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH PRIOR TO BACK FILLING. BACK FILL SHALL CONSIST OF APPROVED MATERIALS SUCH AS EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE, FREE FROM CLODS OR LARGE STONES OVER 2 1/2" MAX DIMENSIONS. ALL BACK FILL SHALL BE PLACED IN COMPACTED LAYERS.
- 6. ALL FILL MATERIALS AND FOUNDATION BACK FILL SHALL BE PLACED IN MAXIMUM 6" THICK LIFTS BEFORE COMPACTION. EACH LIFT SHALL BE WETTED IF REQUIRED AND COMPACTED TO NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D1557.
- NEWLY PLACED CONCRETE FOUNDATIONS SHALL CURE A MINIMUM OF 72 HOURS PRIOR TO BACK FILLING.
- 8. FINISHED GRADING SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AND PREVENT STANDING WATER. THE FINAL (FINISH) ELEVATION OF SLAB FOUNDATIONS SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE CENTER. FINISH GRADE OF CONCRETE PADS SHALL BE A MAXIMUM OF 4 INCHES ABOVE FINAL FINISH GRADE ELEVATIONS WHERE REQUIRED.
- 9. NEWLY GRADED GRAVEL SURFACE AREAS TO RECEIVE GRAVEL SHALL BE COVERED WITH GEOTEXTILE FABRIC TYPE: TYPAR—3401 AS MANUFACTURED BY TYPAR GEOSYNTHETICS OR AN APPROVED EQUIVALENT, SHOWN ON PLANS. THE GEOTEXTILE FABRIC SHALL BE BLACK IN COLOR TO CONTROL THE RECURRENCE OF VEGETATIVE GROWTH AND EXTEND TO WITHIN 1 FOOT OUTSIDE THE SITE FENCING OR ELECTRICAL GROUNDING SYSTEM PERIMETER WHICH EVER IS GREATER. ALL FABRIC SHALL BE COVERED WITH A MINIMUM OF 4" DEEP COMPACTED STONE OR GRAVEL AS SPECIFIED. I.E. DOT TYPE NO. 57 FOR FENCED COMPOUND: DOT TYPE NO. 67 FOR ACCESS DRIVE AREA, UNLESS OTHERWISE NOTED.
- 10. IN ALL AREAS TO RECEIVE FILL: REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SUCH THAT FILL MATERIAL WILL BIND WITH EXISTING/PREPARED SOIL SURFACE.
- 11. WHEN SUB GRADE OR PREPARED GROUND SURFACE HAS A DENSITY LESS THAN THAT REQUIRED FOR THE FILL MATERIAL, SCARIFY THE GROUND SURFACE TO DEPTH REQUIRED. PULVERIZE, MOISTURE—CONDITION AND/OR AERATE THE SOILS AND RECOMPACT TO THE REQUIRED DENSITY PRIOR TO PLACEMENT OF FILLS.
- 12. IN AREAS WHICH EXISTING GRAVEL SURFACING IS REMOVED OR DISTURBED DURING CONSTRUCTION OPERATIONS, REPLACE GRAVEL SURFACING TO MATCH ADJACENT GRAVEL SURFACING AND RESTORED TO THE SAME THICKNESS AND COMPACTION AS SPECIFIED. ALL RESTORED GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES.

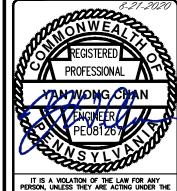
- 13. EXISTING GRAVEL SURFACING MAY NOT BE REUSED.
- 14. GRAVEL SUB SURFACE SHALL BE PREPARED TO REQUIRED COMPACTION AND SUB GRADE ELEVATIONS BEFORE GRAVEL SURFACING IS PLACED AND/OR RESTORED. ANY LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED AND ANY DEPRESSIONS IN THE SUB GRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUB GRADE.
- 15. PROTECT EXISTING GRAVEL SURFACING AND SUB GRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING "MATTS" OR OTHER SUITABLE PROTECTION DESIGNED TO SPREAD EQUIPMENT LOADS AS MAY BE NECESSARY. REPAIR ANY DAMAGE TO EXISTING GRAVEL SURFACING OR SUB GRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTORS OPERATIONS.
- 16. DAMAGE TO EXISTING STRUCTURES AND/OR UTILITIES RESULTING FROM CONTRACTORS NEGLIGENCE SHALL BE REPAIRED AND/OR REPLACED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COST TO THE CONTRACT.
- 17. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF-SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES AT NO ADDITIONAL COST TO THE CONTRACT.





PROJECT NO:	EP4TURES
DRAWN BY:	B. POTESTA
CHECKED BY:	P. CHAN

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3	08.21.20	UPDATED
2	03.04.20	UPDATED
1	08.21.19	UPDATED - POLE RELOCATION
٥	11.12.18	FINALS



PRISON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT

CON01 003

139 W. 3RD AVENUE CONSHOHOCKEN, PA 19428

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-3